SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: de la Monte, Suzanne Wands, Jack R.
- (ii) TITLE OF INVENTION: Transgenic Animals and Cell Lines for Screening Drugs Effective for the Treatment or Prevention of Alzheimer's Disease
- (iii) NUMBER OF SEQUENCES: 14
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Sterne, Kessler, Goldstein & Fox, P.L.L.C.
 - (B) STREET: 1100 New York Ave., Suite 600
 - (C) CITY: Washington
 - (D) STATE: DC
 - (E) COUNTRY: USA
 - (F) ZIP: 20005-3934
 - (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER:
 - (B) FILING DATE:
 - (C) CLASSIFICATION:
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Esmond, Robert W.
 - (B) REGISTRATION NUMBER: 32,893
 - (C) REFERENCE/DOCKET NUMBER: 0609.4370000
 - (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 202-371-2600
 - (B) TELEFAX: 202-371-2540
- (2) INFORMATION FOR SEQ ID NO:1:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1442 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double (D) TOPOLOGY: both
 - (ii) MOLECULE TYPE: cDNA
 - (ix) FEATURE:
 - (A) NAME/KEY: CDS
 - (B) LOCATION: 15..1139
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

TTTTTTTTTT TGAG ATG GAG TTT TCG CTC TTG TTG CCC AGG CTG GAG TGC Met Glu Phe Ser Leu Leu Leu Pro Arg Leu Glu Cys

50

AAT Asn	GGC Gly	GCA Ala 15	ATC Ile	TCA Ser	GCT Ala	CAC His	CGC Arg 20	AAC Asn	CTC Leu	CGC Arg	CTC Leu	CCG Pro 25	GGT Gly	TCA Ser	AGC Ser	98
GAT Asp	TCT Ser 30	CCT Pro	GCC Ala	TCA Ser	GCC Ala	TCC Ser 35	CCA Pro	GTA Val	GCT Ala	GGG Gly	ATT Ile 40	ACA Thr	GGC Gly	ATG Met	TGC Cys	146
ACC Thr 45	CAC His	GCT Ala	CGG Arg	CTA Leu	ATT Ile 50	TTG Leu	TAT Tyr	TTT Phe	TTT Phe	TTA Leu 55	GTA Val	GAG Glu	ATG Met	GAG Glu	TTT Phe 60	194
CTC Leu	CAT His	GTT Val	GGT Gly	CAG Gln 65	GCT Ala	GGT Gly	CTC Leu	GAA Glu	CTC Leu 70	CCG Pro	ACC Thr	TCA Ser	GAT Asp	GAT Asp 75	CCC Pro	242
TCC Ser	GTC Val	TCG Ser	GCC Ala 80	TCC Ser	CAA Gln	AGT Ser	GCT Ala	AGA Arg 85	TAC Tyr	AGG Arg	ACT Thr	GGC Gly	CAC His 90	CAT His	GCC Ala	290
CGG Arg	CTC Leu	TGC Cys 95	CTG Leu	GCT Ala	AAT Asn	TTT Phe	TGT Cys 100	GGT Gly	AGA Arg	AAC Asn	AGG Arg	GTT Val 105	TCA Ser	CTG Leu	ATG Met	338
TGC Cys	CCA Pro 110	AGC Ser	TGG Trp	TCT Ser	CCT Pro	GAG Glu 115	CTC Leu	AAG Lys	CAG Gln	TCC Ser	ACC Thr 120	TGC Cys	CTC Leu	AGC Ser	CTC Leu	386
CCA Pro 125	AAG Lys	TGC Cys	TGG Trp	GAT Asp	TAC Tyr 130	AGG Arg	CGT Arg	GCA Ala	GCC Ala	GTG Val 135	CCT Pro	GGC Gly	CTT Leu	TTT Phe	ATT Ile 140	434
TTA Leu	TTT Phe	TTT Phe	TTA Leu	AGA Arg 145	CAC His	AGG Arg	TGT Cys	CCC Pro	ACT Thr 150	CTT Leu	ACC Thr	CAG Gln	GAT Asp	GAA Glu 155	GTG Val	482
C A G Gln	TGG Trp	TGT Cys	GAT Asp 160	His	AGC Ser	TCA Ser	CTG Leu	CAG Gln 165	Pro	TCA Ser	ACT Thr	CCT Pro	GAG Glu 170	ATC Ile	AAG Lys	530
CAT His	CCT Pro	CCT Pro 175	Ala	TCA Ser	GCC Ala	TCC Ser	CAA Gln 180	Val	GCT Ala	GGG Gly	ACC Thr	Lys 185	Asp	ATG Met	CAC	578
CAC His	TAC Tyr 190	Thr	TGG Trp	CTA Leu	ATT	TTT Phe 195	Ile	TTT Phe	ATT	TTT Phe	AAT Asn 200	. Phe	TTG Leu	AGA Arg	CAG Gln	626
AGT Ser 205	Lev	AAC Asr	TCT Ser	GTC Val	Thr	Gln	GCT Ala	GGA Gly	GTG Val	G CAG Gln 215	Trp	G CGC Arg	AAT Asn	CTI Lev	GGC Gly 220	674
TCA Ser	CTC	G CAA	CCT Pro	CTC Lev 225	ı Pro	CCC Pro	GGG Gly	TTC Phe	AAG Lys 230	Leu	TTC Phe	TCC Ser	TGC Cys	235	AGC Ser	722
CT(Let	C CTO	G AGT 1 Sei	AGC Ser 240	Tr	GAC Asp	TAC Tyr	AGG Arg	G CGC J Arg 245	g Pro	A CCA	A CGC	C CTA	A GCT a Ala 250	. Asr	TTT Phe	770
TTT Phe	r GTA e Val	A TT:	e Lei	A GTA ı Val	A GAC L Glu	ATC Met	GGG Gl ₃ 260	/ Phe	C ACC	C ATO	TTC Phe	C GCC e Ala 269	a Aro	TT(J Let	ATC	818
TTC	TA E	C TC	r GG?	A CC	r TG7	r GAT	CTC	G CC	r GCC	C TC	G GC	C TC	C CA	A AG	r GCT	866

Leu Ile Ser Gly Pro Cys Asp Leu Pro Ala Ser Ala Ser Gln Ser Ala 270 275 280	
GGG ATT ACA GGC GTG AGC CAC CAC GCC CGG CTT ATT TTT AAT TTT TGT Gly Ile Thr Gly Val Ser His His Ala Arg Leu Ile Phe Asn Phe Cys 295	914
TTG TTT GAA ATG GAA TCT CAC TCT GTT ACC CAG GCT GGA GTG CAA TGG Leu Phe Glu Met Glu Ser His Ser Val Thr Gln Ala Gly Val Gln Trp 305 310 315	962
CCA AAT CTC GGC TCA CTG CAA CCT CTG CCT CCC GGG CTC AAG CGA TTC Pro Asn Leu Gly Ser Leu Gln Pro Leu Pro Pro Gly Leu Lys Arg Phe 320 325 330	1010
TCC TGT CTC AGC CTC CCA AGC AGC TGG GAT TAC GGG CAC CTG CCA CCA Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp Tyr Gly His Leu Pro Pro 335	1058
CAC CCC GCT AAT TTT TGT ATT TTC ATT AGA GGC GGG GTT TCA CCA TAT His Pro Ala Asn Phe Cys Ile Phe Ile Arg Gly Gly Val Ser Pro Tyr 350	1106
TTG TCA GGC TGG TCT CAA ACT CCT GAC CTC AGG TGACCCACCT GCCTCAGCCT Leu Ser Gly Trp Ser Gln Thr Pro Asp Leu Arg 365 370 375	1159
TCCAAAGTGC TGGGATTACA GGCGTGAGCC ACCTCACCCA GCCGGCTAAT TTAGATAAAA	1219
AAATATGTAG CAATGGGGGG TCTTGCTATG TTGCCCAGGC TGGTCTCAAA CTTCTGGCTT	1279
CATGCAATCC TTCCAAATGA GCCACAACAC CCAGCCAGTC ACATTTTTTA AACAGTTACA	1339
TCTTTATTTT AGTATACTAG AAAGTAATAC AATAAACATG TCAAACCTGC AAATTCAGTA	1399
GTAACAGAGT TCTTTTATAA CTTTTAAACA AAGCTTTAGA GCA	1442

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 375 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Met Glu Phe Ser Leu Leu Leu Pro Arg Leu Glu Cys Asn Gly Ala Ile 1 5 10 15

Ser Ala His Arg Asn Leu Arg Leu Pro Gly Ser Ser Asp Ser Pro Ala 20 25 30

Ser Ala Ser Pro Val Ala Gly Ile Thr Gly Met Cys Thr His Ala Arg 35 40 45

Leu Ile Leu Tyr Phe Phe Leu Val Glu Met Glu Phe Leu His Val Gly 50 55 60

Gln Ala Gly Leu Glu Leu Pro Thr Ser Asp Asp Pro Ser Val Ser Ala 65 70 75 80

Ser Gln Ser Ala Arg Tyr Arg Thr Gly His His Ala Arg Leu Cys Leu

85 90 95

Ala Asn Phe Cys Gly Arg Asn Arg Val Ser Leu Met Cys Pro Ser Trp 100 105 110

Ser Pro Glu Leu Lys Gln Ser Thr Cys Leu Ser Leu Pro Lys Cys Trp

Asp Tyr Arg Arg Ala Ala Val Pro Gly Leu Phe Ile Leu Phe Phe Leu 130 135 140

Arg His Arg Cys Pro Thr Leu Thr Gln Asp Glu Val Gln Trp Cys Asp 145 150 155

His Ser Ser Leu Gln Pro Ser Thr Pro Glu Ile Lys His Pro Pro Ala 165 170 175

Ser Ala Ser Gln Val Ala Gly Thr Lys Asp Met His His Tyr Thr Trp 180 185 190

Leu Ile Phe Ile Phe Ile Phe Asn Phe Leu Arg Gln Ser Leu Asn Ser 195 200 205

Val Thr Gln Ala Gly Val Gln Trp Arg Asn Leu Gly Ser Leu Gln Pro 210 215 220

Leu Pro Pro Gly Phe Lys Leu Phe Ser Cys Pro Ser Leu Leu Ser Ser 225 230 235

Trp Asp Tyr Arg Arg Pro Pro Arg Leu Ala Asn Phe Phe Val Phe Leu 245 250 255

Val Glu Met Gly Phe Thr Met Phe Ala Arg Leu Ile Leu Ile Ser Gly 260 265 270

Pro Cys Asp Leu Pro Ala Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly 275 280 285

Val Ser His His Ala Arg Leu Ile Phe Asn Phe Cys Leu Phe Glu Met 290 295 300

Glu Ser His Ser Val Thr Gln Ala Gly Val Gln Trp Pro Asn Leu Gly 305 310 315 320

Ser Leu Gln Pro Leu Pro Pro Gly Leu Lys Arg Phe Ser Cys Leu Ser 325 330 335

Leu Pro Ser Ser Trp Asp Tyr Gly His Leu Pro Pro His Pro Ala Asn 340 345 350

Phe Cys Ile Phe Ile Arg Gly Gly Val Ser Pro Tyr Leu Ser Gly Trp 355 360 365

Ser Gln Thr Pro Asp Leu Arg

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1381 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: both
- (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

			-			(/
60	ATGGCGCAAT	CTGGAGTGCA	GTTGCCCAGG	TTTCGCTCTT	GAGATGGAGT	TTTTTTTTT
120	CAGCCTCCCC	TCTCCTGCCT	TTCAAGCGAT	GCCTCCCGGG	CGCAACCTCC	CTCAGCTCAC
180	TTTTTAGTA	TTTTGTATTT	GCTCGGCTAA	TGTGCACCAC	ATTACAGGCA	AGTAGCTGGG
240	TCAGATGATC	ACTCCCGACC	CTGGTCTCGA	GTTGGTCAGG	TTAACTCCAT	GAGATGGAGT
300	GCCCGGCCTC	GAGCCACCAT	TTACAGGCAT	AGTGCTGAGA	GCCTGCCCAA	TCCCGTCTCG
360	GCTGGTCTCC	TGTTGCCCAA	GTTTCACTGA	TAGAAACAGG	ATTTTTGTGG	TGCCTGGCTA
420	GGCGTCAGCC	TGGGATTACA	CCCAAAGTGC	GCCTCAGCCT	CAGTCCACCT	TGAGCTCAAG
480	TACCCAGGAT	GTACCACTCT	AGACACAGGT	ATTTTTTTA	ТТТТТАТТТТ	GTGCCTGGCC
540	CAAGCAATCC	CTCCTGAGAT	CAGCCTTCAA	CAGCTCACTG	GGTGTGATCA	GAAGTGCAGT
600	CCTGGTAATT	CACCACTACA	CAAAGACATG	TAGCTGGGAC	GCCTCCCAAG	TCCTGCCTCA
660	GCTGGAGTGC	TGTCACCCAG	AGTCTCACTC	TTTGAGACAG	TTTTTAATTT	TTTATTTTA
720	TTCTCCTGCC	GTTCAAGTTA	TGCCTCCCGG	CTGCAACCTC	TCTTGGCTCA	AGTGGCGCAA
780	TTTTTTGTAT	CCTAGCTAAT	GCCCACCACG	GACTACAGGC	GAGTAGCTGG	CCAGCCTCCT
840	TTGACCTTGT	TCTTGATCTC	GCCAGGTTGA	CACCATGTTC	GATGGGGTTT	TTTTAGTAGA
900	CCACGCCGGC	GGTCGTGACT	TGGGATTACA	CCCAAAGTGC	CCTCGGCCTA	GATCTGCCTG
960	GTCGGAGTGC	TGTTACCCAG	AATCTCACTC	TTTGAAATGG	TTTTTGTTTG	СТАТТТТТАА
1020	CTCCTGTCTC	TCAAGCGATT	GCCTCCCGGG	CGCAACCTCT	CTCGGCTACT	AATGGCAAAT
1080	TTTGTATTTT	CCCGCTAATT	TGCACCACAC	TTACGGGACC	GCAGCTGGGA	AGCCTCCCAA
1140	CCTCAGGTGA	AAACTCCTGA	GCTGGGTCTC	TATTTGTCAG	GGGTTTACCA	CATTAGAGGC
1200	TCACCCAGCC	GTGAGCCACC	GATTACAGGC	AAAGTGCTGG	TCAGCCTTCC	CCCACCTGCC
1260	CAGGCTGGTC	CTATGTTGCC	TGGGGGTCTG	TATGTAGCAA	GAATAAAAA	GGCTAATTTG
1320	CAGTCACATT	AACACCCAGC	AATGAGCCAC	AATCCTTCCA	GGCTTCAGTC	TCAAACTTCT
1380	ACATGTCAAA	AATACAATAA	ACTAGAAAGT	ATTTTAGTAT	TTACATCTTT	TTTTAAACAG
1381						С

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 1418 base pairs

(B) TYPE: nucleic acid (C) STRANDEDNESS: both (D) TOPOLOGY: both

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TTTTTTTTT GAGATGGAGT TTTCGCTCTT GTTGCCCAGG CTGGAGTGCA ATGGCGCAAT

CTCAGCTCAC CGCAACCTCC GCCTCCCGGG TTCAAGCGAT TCTCCTGCCT CAGCCTCCCC

60

120

AGTAGGCTGG GATTACAGGC ATGTGCACCA CGCTCGGCTA ATTTTGTATT TTTTTTTAGT

180

AGAGATGGAG TTTCTCCATG TTGGTCAGGC TGGTCTCGAA CTCCGACCTC AGATGATCCT 240

CCCGTCTCGG CCTCCCAAAG TGCTAGATAC AGGACTGAGC ACCATGCCCG GCCTCTGCCT 300

GGCTAATTTT TGTGGTAGAA ACAGGGTTTC ACTGATGTGC CCAAGCTGGT CTCCTGAGCT 360

CAAGCAGTCC ACCTGCCTCA GCCTCCCAAA GTGCTGGGAT TACAGGCGTG CAGCCGTGCC 420

TGGCCTTTTT ATTTTATTTT TTTTAAGACA CAGGTGTCCC ACTCTTACCC AGGATGAAGT

480
GCAGTGGTGT GATCACAGCT CACTGCAGCC TTCAACTCTG AGATCAAGCA TCCTCCTGCC

540

TCAGCCTCCC AAAGTAGCTG GGACCAAAGA CATGCACCAC TACACCTGGC TAATTTTTAT 600

TTTTATTTT AATTTTTGA GACAGAGTCT CAACTCTGTC ACCCAGGCTG GAGTGCAGTG 660

GCGCAATCTT GGCTCACTGC AACCTCTGCC TCCCGGGTTC AAGTTATTCT CCTGCCCCAG 720

CCTCCTGAGT AGCTGGGACT ACAGGCGCCC ACCACGCCTA GCTAATTTTT TTGTATTTTT 780

AGTAGAGATG GGGTTTCACC ATGTTCGCCA GGTTGATGCT AGATCTCTTG ACCTTGTGAT 840

CTGCCTGCCT CGGCCTCCCA AAGTGCTGGG ATTACAGGAC GTGACGCCCA CCGCCCGGCC 900

TATTTTTAAT TTTTGTTTGT TTGAAATGGA ATCTCACTCT GTTACCCAGG CTGGAGTGCA 960

ATGGCCAAAT CTCGGCTCAC TGCAACCTCT GCCTCCCGGG CTCAAGCGAT TCTCCTGTCT 1020

CAGCCTCCCA AGCAGCTGGG ATTACGGGCA CCTGCACCAC ACCCCGCTAA TTTTTGTATT 1080

TTCATTAGAG GCGGGGTTTC ACCATATTTG TCAGGCTGGT CTCAAACTCC TGACCTCAGG 1140

TGACCCACCT GCCTCAGCCT TCCAAAGTGC TGGGATTACA GGCGTGACGC CTCACCCAGC 1200

CGGCTAATTT AGATAAAAA ATATGTAGCA ATGGGGGGTC TTGCTATGTT GCCCAGGCTG 1260

GTCTCAAACT TCTGGCTTCA TGCAATCCTT CCAAATGAGC CACAACACCC AGCCAGTCAC 1320

ATTTTTAAAC AGTTACATCT TTATTTTAGT ATACTAGAAA GTGATACGAT AACATGGCGG 1380

AACCTGCAAA TTCGAGTAGT ACAGAGTCTT TTATAACT 1418

(2) INFORMATION FOR SEQ ID NO:5:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 22 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (xi) SEOUENCE DESCRIPTION: SEQ ID NO:5:

22

TGTCCCACTC TTACCCAGGA TG

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

(i) SEQUENCE CHARACTERISTICS:

(ii) MOLECULE TYPE: cDNA

(A) LENGTH: 30 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear

(A) LENGTH: 24 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear

	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:	
TTCA'	TCCTGG GTAAGAGTGG GACACCTGTG	30
(2)	INFORMATION FOR SEQ ID NO:10:	
	 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 26 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
	(ii) MOLECULE TYPE: cDNA	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:	
TGGT	GCATGT CTTTGGTCCC AGCTAC	26
(2)	INFORMATION FOR SEQ ID NO:11:	
	 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 30 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
	(ii) MOLECULE TYPE: cDNA	
ATCA	 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11: ACCTGG CGAACATGGT GAACCCCATC INFORMATION FOR SEQ ID NO:12: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 14 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	30
	(ii) MOLECULE TYPE: cDNA	
САСТ	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:	14
	INFORMATION FOR SEQ ID NO:13:	-
(2)	(i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 14 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: cDNA	

(xi) SEQUENCE D	DESCRIPTION: SEQ ID NO:13:	
CCAGGTGTAG NCCA		14
(2) INFORMATION FOR	R SEQ ID NO:14:	
(A) LENGT (B) TYPE: (C) STRAN	CHARACTERISTICS: TH: 14 base pairs : nucleic acid NDEDNESS: single LOGY: linear	
(ii) MOLECULE T	TYPE: cDNA	
(xi) SEQUENCE I	DESCRIPTION: SEQ ID NO:14:	
CAAGGTCCAG NCCA		14